

## ABSTRACT

An ion beam implanter includes an ion beam source for generating an ion beam moving along a beam line and a vacuum or implantation chamber wherein a workpiece is positioned to intersect the ion beam for ion implantation of a surface of the workpiece by the ion beam. The ion beam implanter further includes a workpiece support structure coupled to the implantation chamber and supporting the workpiece. The workpiece support structure includes a chuck including a rotatable pedestal for supporting the workpiece. The workpiece support structure further includes a first rotatable reel coupled to and rotatable with the pedestal and a flexible, hollow cord carrying facilities such as coolant lines and electrical power conductors coupled to the first rotatable reel such that, as the pedestal is rotated in a first direction, a length of the flexible cord that is wrapped around the first reel increases and, as the pedestal is rotated in an opposite direction, a length of the flexible cord that is wrapped around the first reel decreases.